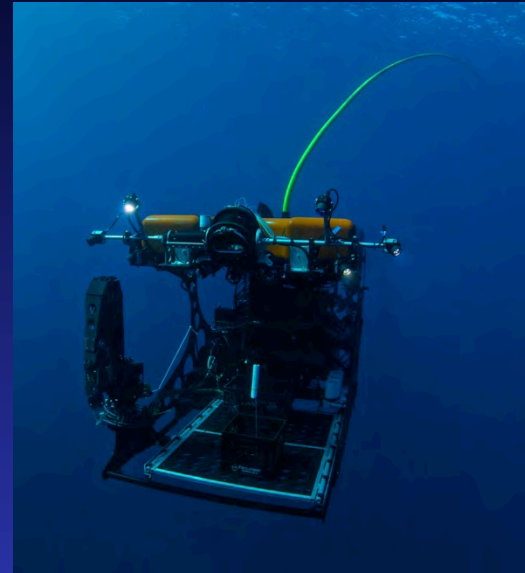


Nereid HT



What

- Alucia needs a deep ROV
- 3 modes of operation (tether)
- Immersive imaging
- Manipulation and Sampling
- 2500 meters depth

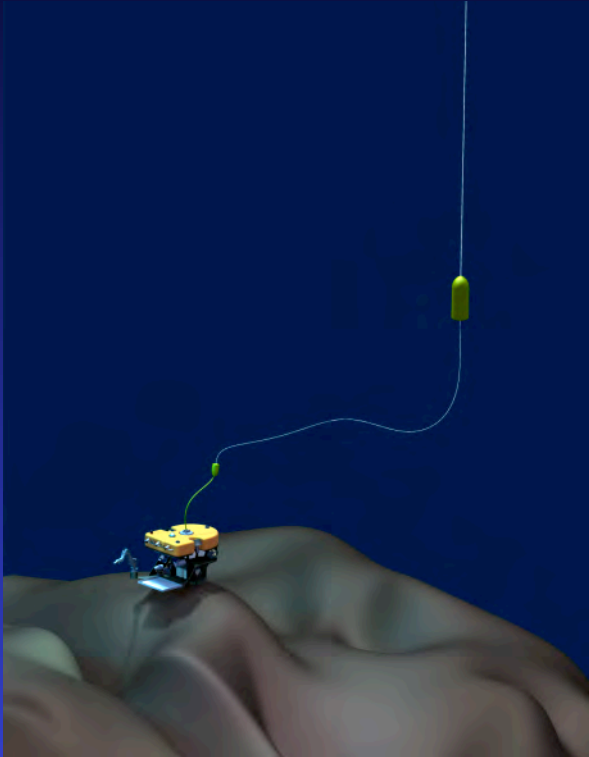


When

- Subsystems:
 - Tested in Gen1 or in Nereid UI dock trails September with vehicle assembly end of '13
 - Shipboard systems complete March '14
- At Sea test March '14 (New Zealand)
 - Successful demo of ROV ops from non-DP platform with small winch
 - Uncovered issues with lifting tether requiring a revision
 - Second trial awaiting approval and schedule (June 2015)



Nereid HT Operating Modes



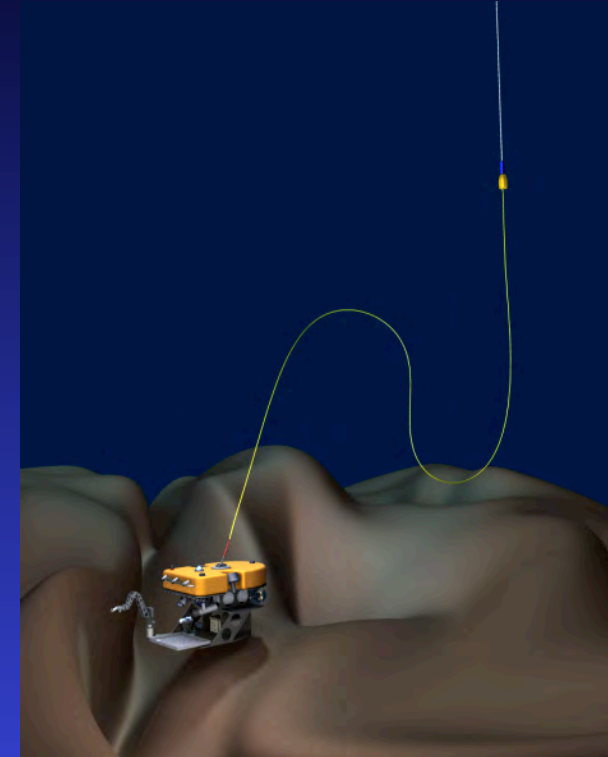
Light-Fiber Tether

Practically unlimited bandwidth with 20 km horizontal standoff.
Expendable cost ~\$20k



Free-Space Optical

Through-water optical communications at ranges up to 100+ meters for complete freedom from a tether



Small Footprint Tether

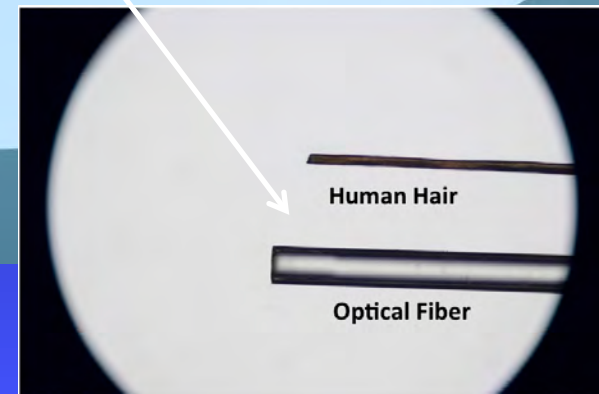
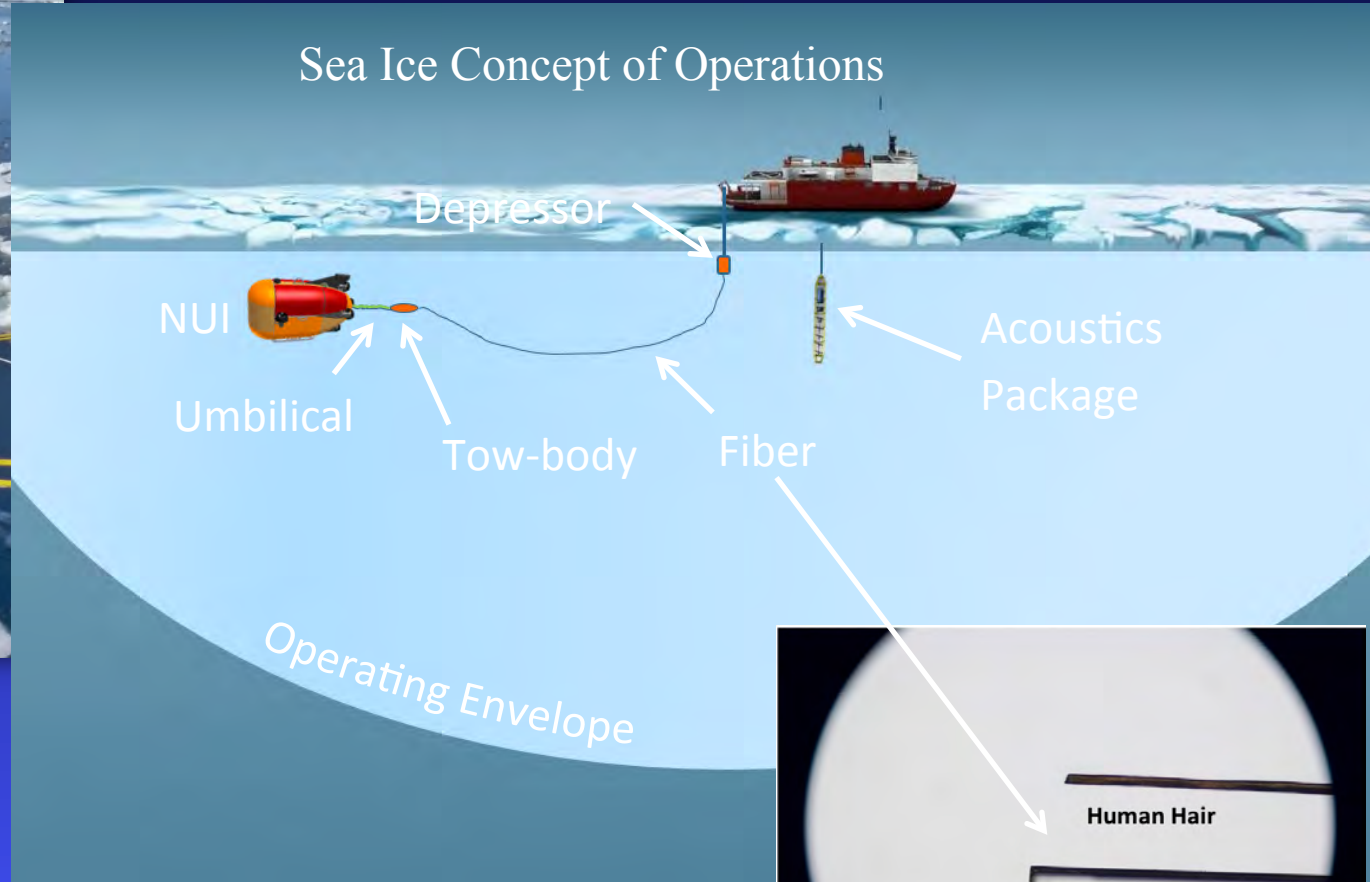
Light conventional tether (CTD wire) capable of trickle-charging with minimal on-board infrastructure

Nereid Under Ice (NUI)

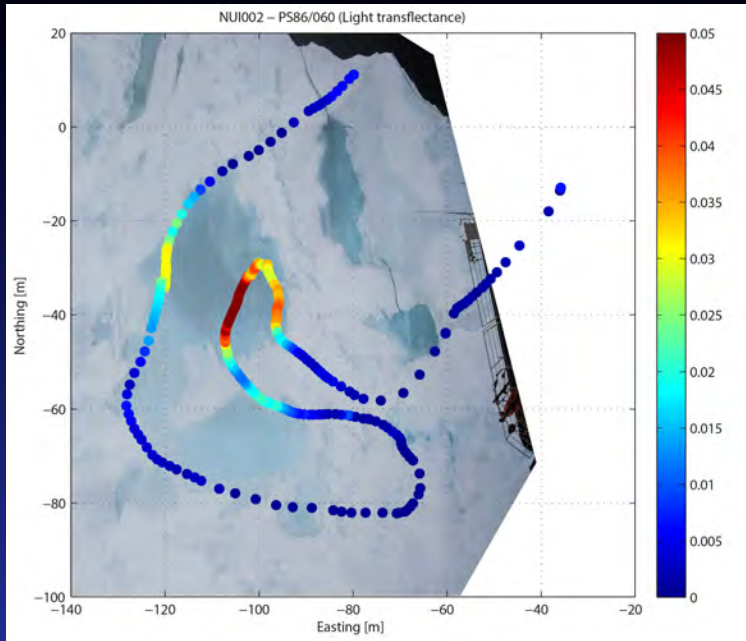
- Hybrid ROV: access
- Telepresence: explore, adapt, interact



Ice Trials,
Polarstern,
July 2014

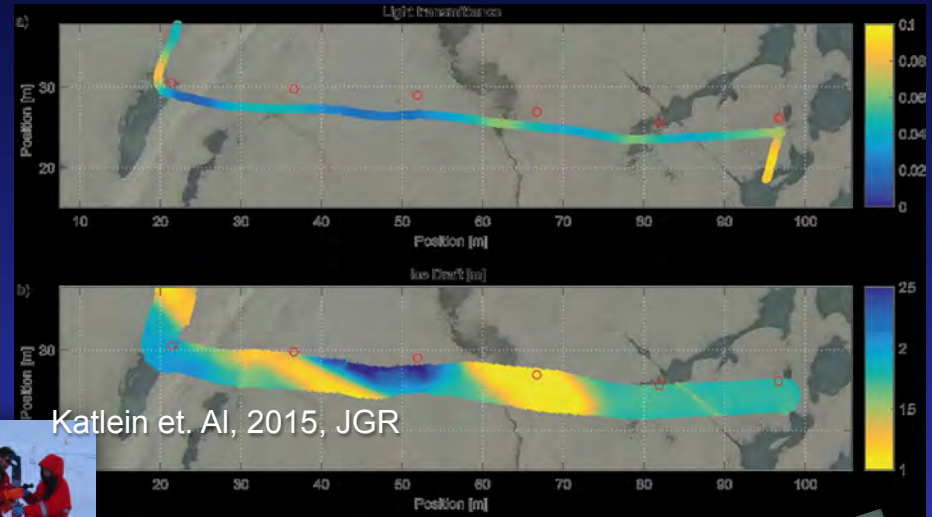


Optics



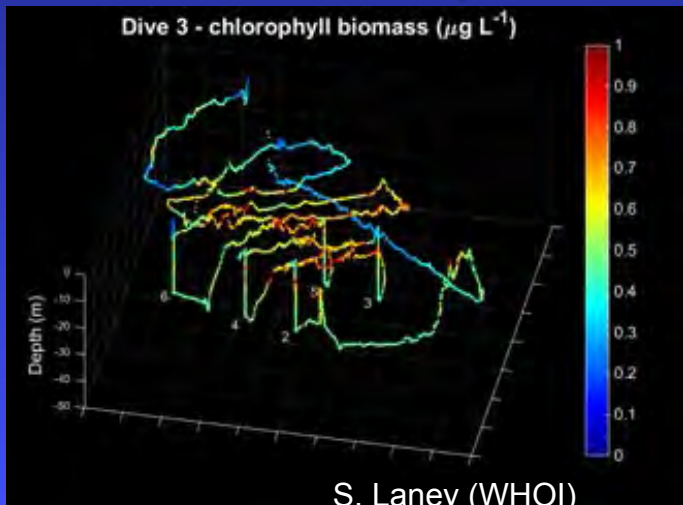
C. Katlein (AWI)

Co-Registered Multibeam



Katlein et. Al, 2015, JGR

Fluorometry



S. Laney (WHOI)

Still-Camera



H.Singh (WHOI)

2.5m